

# OCR Computer Science A Level

## 1.3.1 Compression, Encryption and Hashing

### Flashcards



What name is given to the public and private keys used in asymmetric encryption?



What name is given to the public and private keys used in asymmetric encryption?

Key pair



# Name the two categories of compression



Name the two categories of compression

Lossy and lossless



In which type of compression is the quality of a file not degraded?



In which type of compression is the quality of a file not degraded?

**Lossless**



# What is the purpose of encryption?



# What is the purpose of encryption?

To keep data secure during transmission



# Name one type of lossless compression



# Name one type of lossless compression

One from:

- Run length encoding
- Dictionary encoding



In which form of encryption do the sender and receiver share the same private key?



In which form of encryption do the sender and receiver share the same private key?

Symmetric encryption



# How many keys are used in asymmetric encryption?



How many keys are used in asymmetric encryption?

Two (one public and one private)



If person A wants to send a message to person B using asymmetric encryption, which key should they use to encrypt the message?

- A: A's public key
- B: A's private key

- C: B's public key
- D: B's private key



If person A wants to send a message to person B using asymmetric encryption, which key should they use to encrypt the message?

**C: B's public key**

A message encrypted with B's public key can only be decrypted with B's private key, which only B has access to



What is said to have occurred when two keys map to the same hash?



What is said to have occurred when two keys map to the same hash?

A collision



In which kind of lossless compression are repeated characters replaced by one occurrence and the number of times to repeat the character?



In which kind of lossless compression are repeated characters replaced by one occurrence and the number of times to repeat the character?

Run length encoding



What name is given to the process of turning an input into a fixed size value?



What name is given to the process of turning an input into a fixed size value?

# Hashing



# Which data structure uses hashing to store information with constant lookup time?



Which data structure uses hashing to store information with constant lookup time?

Hash table



# What is meant by compression?



# What is meant by compression?

The process of reducing the space required to store a file



Name two properties that a hashing algorithm should have



Name two properties that a hashing algorithm should have

Two from:

- Low chance of collision
- Quick to calculate
- Output smaller than input

